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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,447	02/06/2001	Moe K. Barani	130815.90026	3721

7590 12/19/2001

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EXAMINER
NGUYEN, TRAN N

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 12/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/700,447	Applicant(s) Barani et al
	Examiner Nguyen, Tran N	Art Unit 2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-10* _____ is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-10* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(e)-(d), which papers have been placed of record in the PCT file.

Specification

2. Because of the lengthy specification in this application, it has not been checked to the extent necessary to determine the presence of all possible minor and informal errors. Applicant's cooperation is therefore requested in promptly correcting any errors of which the applicant may become aware of in the specification and/or the drawings.

Claim Rejections - 35 USC § 112

3. **Claims 1-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Among claims 1-10, the uses of the terms "which", "it" and "its" make the claimed language indefinite because those terms do not clearly set antecedent basis as a reference to the specific referred subject matter. The applicant is required to change the above terms with appropriate antecedent basis for the referred subject matter to clarify the recitations of the claims.

In claim 8, "sufficient" is used twice in the recitation. The term "sufficient" is a relative term that does not clearly and positively recite the limitation of the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-5 and 7-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Syverson (US 5918728) in view of Muller (US 4730136).

Syverson substantially discloses the claimed invention (see the figure and cols 3-4). Syverson only differs from the claimed invention in one respect that is a position sensor, which is supported by the stator shaft, for detecting position of the rotor with respect to the stator shaft.

Muller, however, discloses a permanent magnet brushless DC motor comprising a circuit board (29) including a position sensor, Hall (37), which is supported by the stator shaft, for detecting position of the rotor with respect to the stator shaft (13). This would provide the motor with a detection means for positioning the rotor in a position that is favorable for starting so that reliable starting would be ensured. The Examiner also takes Official Notice that position sensor is a well known component in dynamoelectric machinery art.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Syverson's roller motor by providing a position sensor, which is supported

by the stator shaft, for detecting position of the rotor with respect to the stator shaft, as taught by Muller. Doing so would provide the motor with a detection means for positioning the rotor in a position that is favorable for starting so that reliable starting would be ensured.

Regarding the position of the motor being fitted partial inside the roller instead of fitted entire length of the roller, those skilled in the art would realize that the shape and size of the motor depend upon a particular application of the roller assembly, i.e., the required output power needed from the motor as well as the overall size of the roller. Thus, this will determine whether the motor is fitted partially inside or entirely inside the roller.

Therefore, it would have been obvious at the time the invention was made to configure either the motor's or the roller's size so that the motor is fitted partially inside the roller because it has been held that change in size or shape is generally recognized as being within the level of ordinary skill in the art. ***In re Rose,* 105 USPQ 237 (CCPA 1955).** Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the motor so that it only located partially inside the roller. This is obvious because it has been held that rearranging parts of an invention involves only routine skill in the art. ***In re Japikse, 86 USPQ 70.***

Regarding the number stator coils' turns to produce a ratio of voltage to speed as in claim 8, Syverson discusses about the gauge size of the wire and the speed of the motor (col 4, lines 1-58). Thus, those skilled in the art would understand that, by applying the Syverson's disclosure, it

would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the stator of the Syverson's motor by selecting an appropriate wire's gauge size and determine an appropriate number of coil turns in order to obtain a workable range between the ratio of the voltage to the speed of the motor. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. **In re Aller, 105 USPQ 233.**

6. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Syverson and Muller, as applied in the rejection against the base claim, and further in view of Gale et al (US 4598240)

The combination of Syverson and Muller refs substantially discloses the claimed invention, except for the added limitations of rotor including a plurality of magnet segments with the roller providing a magnetic path between segments.

Gale et al, however, discloses a permanent magnet rotor having the cylinder (13) and a plurality of magnet segments (132a-f) with alternate polarity, wherein the magnet segments and the cylinder providing a magnetic path between segments by the gap (134) between adjacent magnet segments. The Examiner takes Official Notice that rotor having a cylinder with magnet segments arranged with a gap between adjacent magnet segments to form a magnetic path by providing a gap between adjacent magnet segments is well known in the art (see cited refs for

detail). This would optimize the magnetic flux flow between adjacent magnet segments as well as between the stator and the rotor.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Syverson's roller motor by providing the magnet rotor assembly as a plurality of magnet segments on the roller, wherein a magnetic path is establish between the segment and the cylinder by a gap between adjacent magnet segments. Doing so would optimize the magnetic flux flow between adjacent magnet segments as well as between the stator and the rotor.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran Nguyen whose telephone number is (703) 308-1639.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. The fax phone number for this Group is (703) 305-3431 (32).

TRAN NGUYEN

PRIMARY PATENT EXAMINER

TC-2800